

# MILITARY FUNDAMENTALS FOR DA CIVILIANS

## (Lesson 3)



★ ★ AFSC - *On the Line*



**In another triumph for cost effectiveness, the Army announced this week that it has cancelled the \$1.4 Billion "Grizzly" and "Wolverine" Engineer Vehicle Programs in favor of the \$199.99 "Chipmunk".**

# Army Doctrine

**Doctrine is the concise expression of how Army forces contribute to unified action in campaigns, major operations, battles, and engagements. While it complements joint doctrine, Army doctrine also describes the Army's approach and contributions to full spectrum operations on land. Army doctrine is authoritative but not prescriptive. Where conflicts between Army and joint doctrine arise, joint doctrine takes precedence.**

**The primer on the U.S. Army's Doctrine? FM 3-0**

# Doctrine On-Line

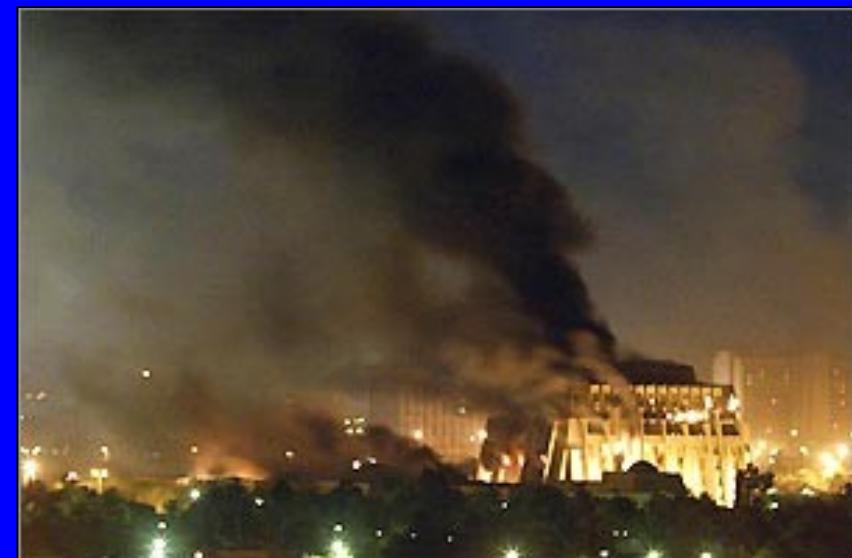
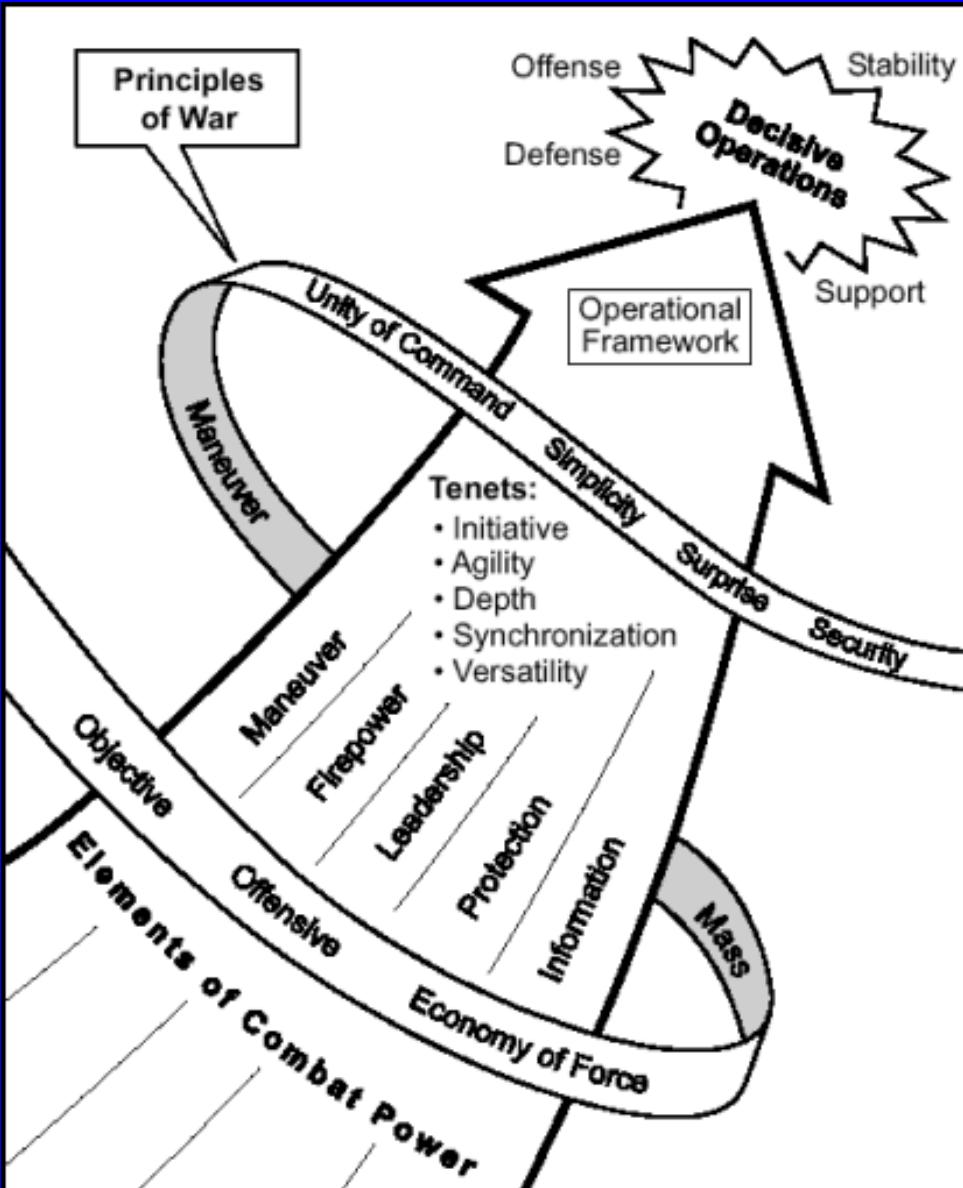
**Three Key Web Sites for Doctrine and Regulations:**

**[www.usapa.army.mil](http://www.usapa.army.mil) -- Army regulations, DA Pams,**

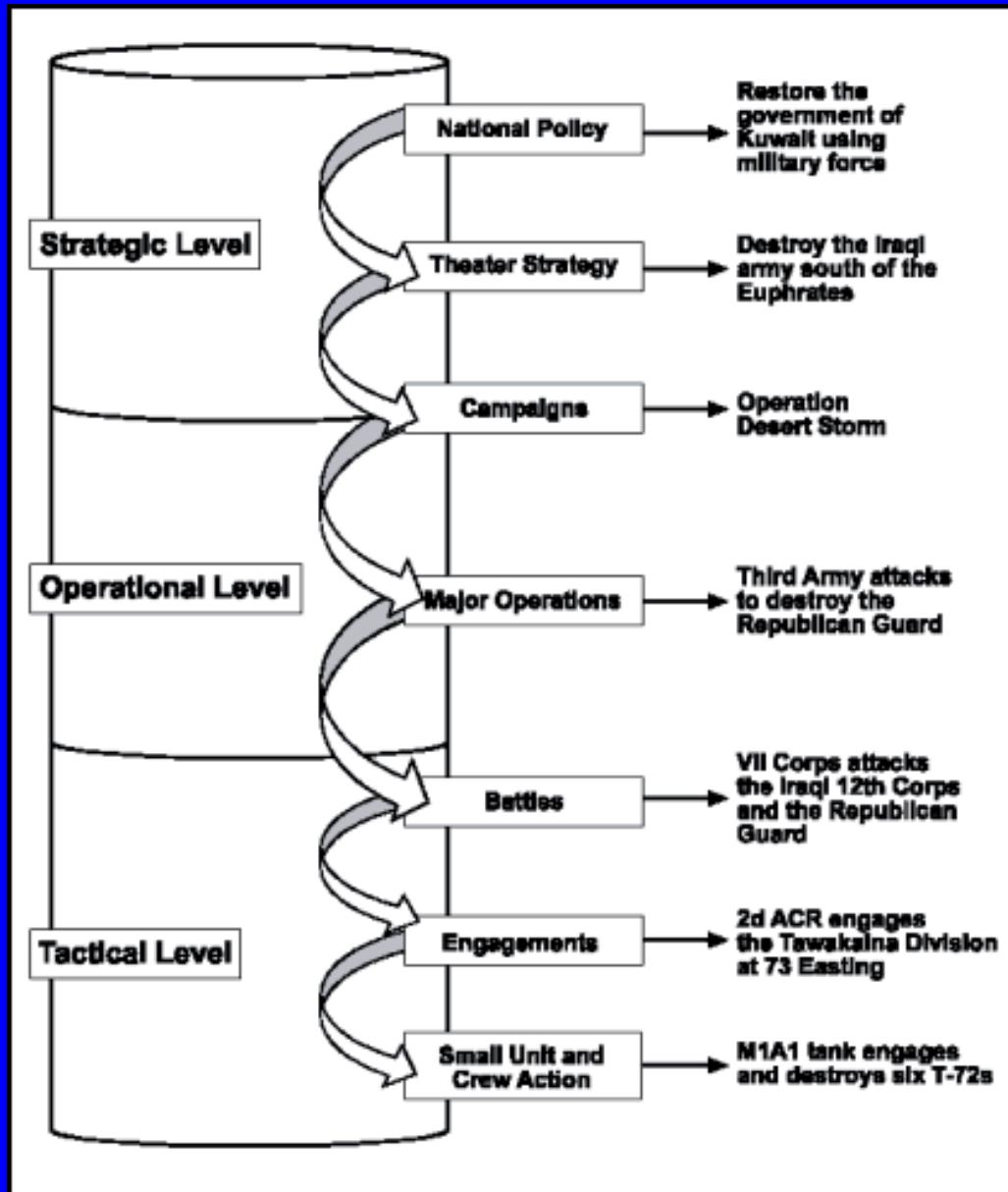
**[www.adtdl.army.mil](http://www.adtdl.army.mil) -- Field Manuals and other.**

**[www.cgsc.army.mil](http://www.cgsc.army.mil) -- Course references; updated a**

# Principles of War



# Levels of War



# Types of Operations

Military Operations	General US Goal	Offense	Defense	Stability	Support
War	Fight and Win War	M T W			
Military Operations Other Than War	Deter War and Resolve Conflict Promote Peace	S S C P M E			Based on Need

**LEGEND**

MTW - major theater war  
 SSC - smaller-scale contingency  
 PME - peacetime military engagement

# Operations Other Than War (OOTW)

Noncombatant Evacuation

Humanitarian Assistance/Disaster Relief

Security Assistance

Counterdrug Ops

Combating Terrorism

Peacekeeping Ops

Peace Enforcement

Show of Force

Spt for Insurgencies/Counterinsurge



# Historical View of Army Doctrine

**“One of the serious problems in planning against American doctrine is that the Americans do not read their maps. Do they feel any obligations to follow their doctrine?”**  
- Soviet Analyst

**“If we don’t know what we are doing, the enemy certainly can’t anticipate our future actions.”**  
- Anon U.S. Officer

# Logistics Tenets

- **Integration**
- **Responsiveness**
- **Simplicity**
- **Flexibility**
- **Attainability**
- **Sustainability**
- **Survivability**
- **Economy**

# Levels of Logistics

## Strategic Level

- Mobilization
- Requirements Determination
- Acquisition
- Prepositioning
- Strategic Mobility
- Reconstitution
- Demobilization

▪ Links the nations economic base to military operations

▪ AMC, DLA, GSA

## Operational Level

- Reception of Army Forces Positioning Facilities
- Management/Redeployment Units and Soldiers
- Distribution Management
- Reconstitution of ARFOR Capabilities

- Links the strategic and tactical levels
- Identify requirements to strategic level and coordinate distribution
- Look forward to tactical level to ensure requirements are met.

▪ TSC, LSE, ASG

## Tactical Level

- Man
- Arm
- Fuel
- Fix
- Move
- Sustain the Soldier and his Systems

▪ Comprises all activities necessary to support battles and engagements

▪ COSCOM / DISCOM

# Classes of Supply

Table 6-1. Classes of Supply

Class	Supplies
I	<b>Subsistence, gratuitous health and comfort items.</b>
II	<b>Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, unclassified maps, administrative and housekeeping supplies and equipment.</b>
III	<b>Petroleum, fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, deicer and antifreeze compounds, components, and additives of petroleum and chemical products, and coal.</b>
IV	<b>Construction materials, including installed equipment, and all fortification and barrier materials.</b>
V	<b>Ammunition of all types, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and associated items.</b>
VI	<b>Personal demand items (such as health and hygiene products, soaps and toothpaste, writing material, snack food, beverages, cigarettes, batteries, and cameras—nonmilitary sales items).</b>
VII	<b>Major end items such as launchers, tanks, mobile machine shops, and vehicles.</b>
VIII	<b>Medical materiel including repair parts peculiar to medical equipment.</b>
IX	<b>Repair parts and components to include kits, assemblies, and subassemblies (repairable or non-repairable) required for maintenance support of all equipment.</b>
X	<b>Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX).</b>
Miscellaneous	<b>Water, salvage, and captured material.</b>

# Building up Supplies

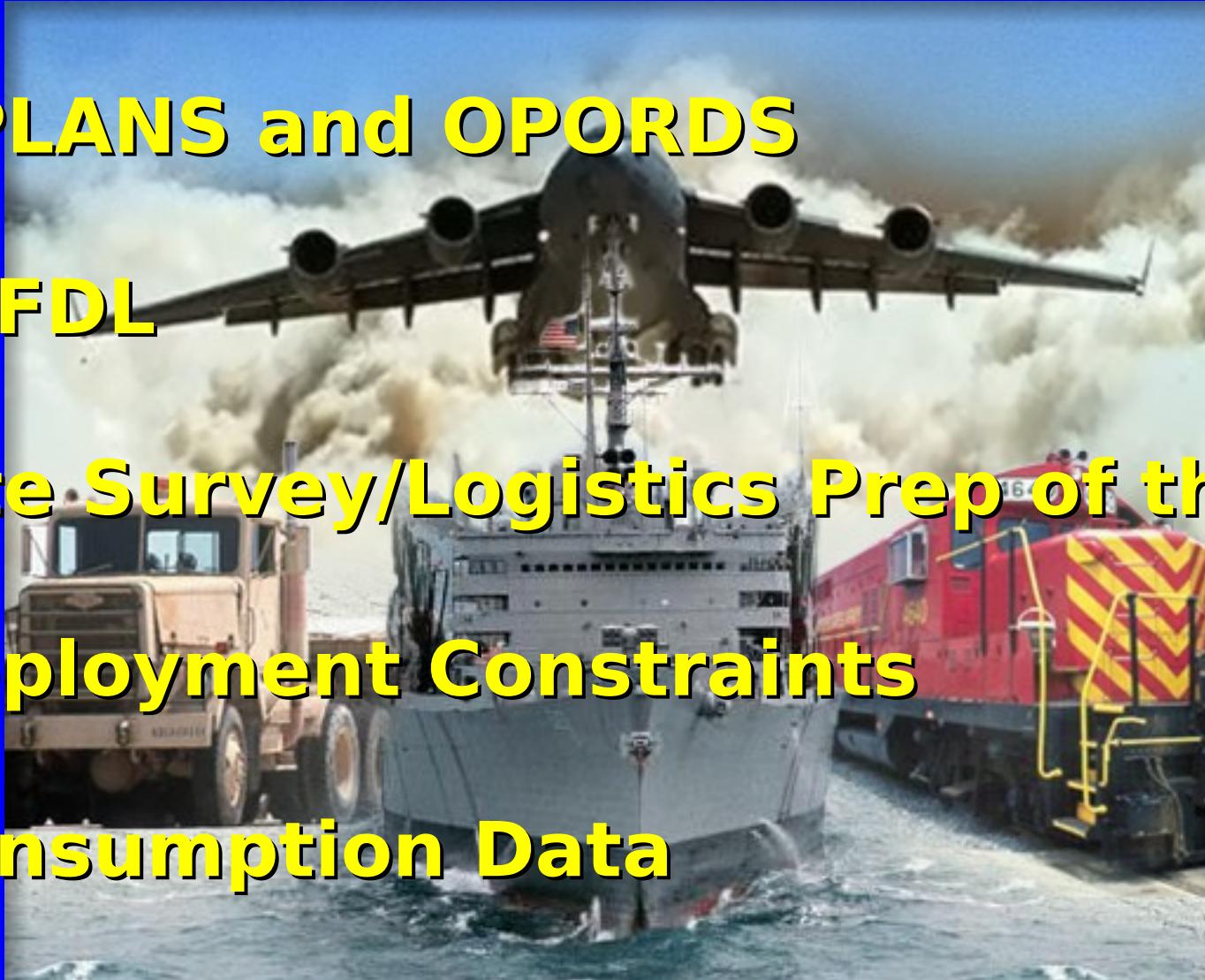
## Stockage Levels

## Days of Supply

Class	DS	GS
I	3	7
II	3	7
III (pkg)	3	7
III (bulk)	1	3
IV	2	4
V	3	7
VI	3	7
VII	1	
VIII	3	10
IX	15	30

# How We Get There - Deploying

- OPLANS and OPORDS
- TPFDL
- Site Survey/Logistics Prep of the Batt
- Deployment Constraints
- Consumption Data



# Army Vision - Deployment

## Deployment Time Lines:

**Brigade - 4 days**

**Division - 5 days**

**5 Divisions - 30 days**

## Unit Size?

**Brigade      904 Vehicles**

**DISCOM      502 Vehicles**

**AR Div      1,660 Tracks**

**3,603 Wheels**



# Major Deployment Transp

- C-130
- C-141
- C-17
- C-5



# C-130



463L Pallet

108x88  
9,000 lb



Pax	91/74
Load	45,000 Lbs
	32,000 on
Int Dim: inches	Ht Wd
	102 105
463L Pallets	6
Runway	P 4,700 ft W 3,000 x

# C-130

(Cont'd)

**Theater Workhorse - Very Small**



**6K Forklift**



# C-17



Pax	170/102
Load	170,000 Lbs
Int Dim:	Ht      Wd      Ln
inches	142      196      812
463L Pallets	18
Runway	P 5,900 ft W 5,000 x 90

# C-141

Pax	186/110
Load	70,000 Lbs
Int Dim: inches	Ht    Wd    Lt
463L Pallets	103    111    1,0
Runway	13
	P 7,600 ft
	W 3,000 x 90



(Scheduled to retire in FY

# C-5

Pax 74

Load 256,000 Lbs

Int Dim: Ht Wd Ln  
inches

156	144	1,454
<108	216	

if



Hauls Tanks, but  
VERY Unreliable (50%)



# 10K Forklift

Length	277
Width	107
Height	137
Wt	35,400



Cage must come off to fit in C-141

Won't Fit in C-130 - Prime piece of MHE

# M998 Truck - HMMWV



## ► M-998 HMMWV

Type: Multipurpose wheeled vehicle  
Entered Army service: 1985  
Specifications: (basic model)  
Length: 15 ft  
Weight: 5,200 lbs  
Maximum speed: 65 mph  
Range: 300 mi



# MTV / LMTV

## M1078 Light Medium Tactical Vehicle



### ◀ FMTV

Type: Family of medium tactical vehicles  
Entered Army service: 1996  
Variants in service: M-1078/1079/1081 Light Medium tactical Vehicle (LMTV), M-1082-1095 Medium Tactical Vehicle (MTV)  
Specifications: (M-1078 Cargo Truck)  
Length: 21 ft  
Weight: 16,499 lbs  
Range: 400 mi  
Crew: 1

# M-977 HEMTT

## Heavy Expanded Mobility Tactical Vehi

### ► **M-977 HEMTT**

Type: Heavy Expanded Mobility Tactical Truck

Entered Army service: 1983

Variants in service: M-977/978/983/984/985

Specifications: (basic model)

Length: 33 ft 4.5 in

Weight: 62,000 lbs

Range: 300 mi

Crew: 2



# M2/M3 Bradley Fighting Veh



## ◀ **M2/M3 Bradley**

Type: Infantry/cavalry fighting vehicle  
Entered Army service: 1981  
Variants in service: M2A1/A2 IFVs, M3A1/A2 CFVs  
Specifications: (M2)  
Length: 21 ft 2 in  
Weight: 50,000 lbs  
Main gun: 25mm chain gun  
Crew: 3

# M1 Abrams Main Battle Tank



## *M1 Abrams*

Type: Main battle tank

Entered Army service: 1980

Variants in service: M1, M1A1, M1A2

Specifications:

Length: 32 ft 0.5 in

Weight: 120,000 lbs

Speed: 45 mph

Main gun: 120 mm

Crew: 4





# Anti-Tank Weapons

## ▲ Javelin

Type: Anti-tank missile  
Entered Army service: 1996  
Specifications:  
Length overall: 3 ft 6 in  
Weight: 26.1 lbs  
Range: 1.4 mi  
Crew: 2

## ► BGM-71 TOW

Type: Wire-guided anti-tank missile  
Entered Army service: 1970  
Variants in service: TOW 2/2A/2B  
Specifications: (Basic TOW)  
Length overall: 3 ft 10 in  
Weight: 173 lbs  
Range: 2.5 mi  
Crew: 2



# M113 Armored Personnel Carrier



## M113 FAMILY OF VEHICLES

Type: Armored personnel carrier/mortar carrier/command post vehicle

Entered Army service: 1960

Variants in service: M113A2, M113A3, M106, M577, M1064A3

Specifications: (M113A3)

Length: 17 ft 5 in

Weight: 27,000 lbs

Range: 300 mi

Crew: 2

# Stryker IAV



## ► **Stryker**

Type: Interim armored vehicle  
Entered Army service: 2001

Variants in service: Infantry carrier, engineer vehicle, command-and-control vehicle

Specifications: (ICV)  
Length: 22 ft 9 in  
Weight: 36,240 lbs  
Range: 312 miles

# M992 Ammo Carrier



<b>Length</b>	<b>260</b>
<b>Width</b>	<b>124</b>
<b>Height</b>	<b>129</b>
<b>Wt</b>	<b>46,000</b>

# M88 Armored Recovery Ve

## ► M88

Type: Armored recovery vehicle

Entered Army service: 1961

Variants in service: M88A1,  
M88A2 Hercules

Specifications: (M88A2)

Length: 28 ft 4 in

Weight: 140,000 lbs

Range: 280 mi

Crew: 3



# M9 ACE Armored Earthmover

## ► **M9 Ace**

Type: Armored earthmover

Entered Army service: 1986

Specifications:

Length: 20 ft 6 in

Weight: 54,000 lbs

Range: 200 mi

Crew: 1



# M93 Fox Armored NBC Recon



## ► **M-93 Fox**

Type: Armored NBC reconnaissance vehicle  
Entered Army service: 1998  
Variants in service: XM-93, M-93A1  
Specifications: (M-93A1)  
Length: 18 ft 8 in  
Weight: 40,400 lbs  
Range: 500 mi  
Crew: 3

# M26 - MLRS



## ◀ M270 MLRS

Type: Multiple Launch Rocket System  
Entered Army service: 1983  
Specifications: (Launcher)  
Length: 22 ft 10 in  
Weight: 55,536 lbs  
Average speed: 30 mph  
Max speed: 40 mph  
Range: 300 mi  
Crew: 3



**“Steel Rain”**

# M109 155mm SP Howitzer

## ► M109

Type: Self-propelled howitzer  
Entered Army service: 1963 (M109)  
Variants in service: M109A2/3/5/6  
Specifications: (M109A6)  
Length: 32 ft 2 in  
Weight: 63,300 lbs  
Main gun: M-284 155 mm howitzer  
Crew: 6



## M119 105mm Lightweight Towed Howitzer

**Entered Army Service: 1989**

**Caliber: 105 mm**

**Length: 16 ft**

**Weight: 4,100 lbs**

**Range: 13 mi**



## M198 155mm Medium Towed Howitzer

**Length 290**  
**Width 99**  
**Height 86**  
**Wt 15,760**



# 81mm Mortar



## *M-252 Mortar*

Type: 81mm mortar

Entered Army service: 1987

Specifications:

Caliber: 81 mm

Barrel length: 4 ft 6 in

Weight: 91 lbs

Range: 5,600 m

Rate of fire: 15 rounds/min sustained

# M-9 Pistol

## ► **M-9 Pistol**

Type: Semiautomatic pistol  
Entered Army service: 1990

### Specifications:

Caliber: 9 mm

Length: 217 mm

Barrel length: 125 mm

Weight: 850 g

Range: 50 m



# M-4 Carbine



## ► ***M-4 Carbine***

Type: Compact assault rifle  
Entered Army Service: 1997  
Specifications:  
Caliber: 5.56 mm  
Weight: 5.65 lbs  
Range: 500 m  
Rate of fire: variable,  
depending on rate selected

# M-16 Rifle

## ► **M-16 Rifle**

Type: Assault rifle

Entered Army service: 1964

Variants: M-16A1/A2/A3

Specifications:

Caliber: 5.56 mm

Weight: 7.5 lbs

Range: 800 m

Rate of fire: variable, depending on rate selected



# -249 Squad Automatic Weapon (SAW)

## ► **M-249 SAW**

Type: Squad automatic weapon

Entered Army service: 1987

Specifications:

Caliber: 5.56 mm

Length: 100 cm

Weight: 16.3 lbs

Rate of fire: 750 rounds per minute



# Machine Guns



## ► ***M-2 Machine Gun***

Type: Heavy machine gun  
Entered Army service: 1938  
Specifications:  
Caliber: .50-caliber  
Length: 61.4 in  
Weight: 84 lbs  
Range: 4.2 mi  
Rate of fire: 550 rounds per minute



## ► ***M-240B Machine Gun***

Type: Medium machine gun  
Entered Army service: 1997  
Specifications:  
Caliber: 7.62 mm  
Weight: 27.6 lbs  
Range: 1,100 m  
Rate of fire: 200-600 rounds per minute

# MK 19-3 Grenade MG



## ►MK 19-3 Grenade Machine Gun

Type: Belt-fed automatic  
grenade launcher

Entered Army service: 1983

Specifications:

Caliber: 40 mm

Weight: 72.5 lbs

Range: 2,200 m

Rate of fire: 60 rounds per minute



# Patriot



## ► **MIM-104 Patriot**

Type: Medium/high altitude air-defense missile

Entered Army service: 1985

Specifications:

Length overall: 17 ft 5 in

Weight: 1,534 lbs

Range: 50 mi



# Stinger/Avenger

## ► M-1097 AVENGER

Type: Self-propelled anti-aircraft system

Entered Army service: 1989

Weapons: 8 Stinger missiles,  
1 .50-caliber machine gun

Specifications:

Length: 16 ft 3 in

Weight: 8,600 lbs

Crew: 2



## ▲ FIM-92A Stinger

Type: Short-range air-defense missile

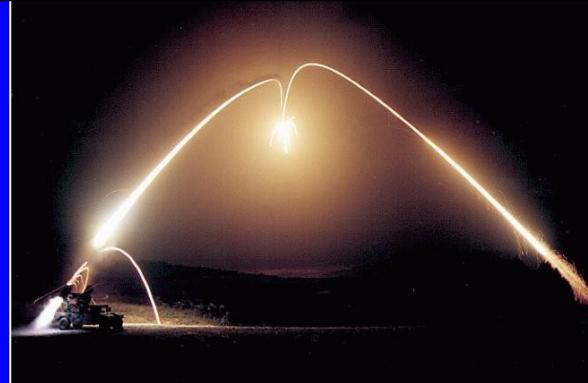
Entered Army service: 1981

Specifications:

Length overall: 60 in

Weight: 34.5 lbs

Range: 3 mi





## ►AH-64 Apache

Type: Attack helicopter  
Entered Army service: 1984  
Variants in service: AH-64A/D  
Specifications: (AH-64A)  
Length: 49 ft 5 in  
Weight: 17,650 lbs  
Speed: 232 mph  
Range: 380 mi  
Crew: 2

# AH-64 Apache Attack Helicopter

Wingtip	Starboard Wing	Cannon	Port Wing	Wingtip	Max Level Flight Speed (V <sub>H</sub> )	Mission Duration	Mission Range
2 ATAM	4 Hellfire 19 FFAR	1,200 Rounds 30mm	4 Hellfire 19 FFAR	2 ATAM	138 knots	2.68 hours	470 kilometers
<b>MULTI-ROLE MISSION</b>							
2 ATAM	8 Hellfire	1,200 Rounds 30mm	8 Hellfire	2 ATAM	136 knots	2.67 hours	460 kilometers
<b>CLOSE-SUPPORT MISSION</b>							
2 ATAM	38 FFAR	1,200 Rounds 30mm	38 FFAR	2 ATAM	140 knots	2.70 hours	485 kilometers
<b>GROUND-SUPPRESSION</b>							

# OH-58 Kiowa Warrior



## ► OH-58 Kiowa

Type: Scout helicopter  
Entered Army service: 1968  
Variants in service:  
OH-58A/B/C/D  
Specifications: (OH-58D)  
Length overall: 40 ft 11 in  
Weight: 4,500 lbs  
Range: 345 mi  
Crew: 1-2





### ► **MH-6 Little Bird**

Type: Special operations helicopter  
Entered Army service: 1981  
Variants in service: AH/MH-6F/G/J  
Specifications:  
Length overall: 24 ft 7 in  
Weight: 3,550 lbs  
Range: 340 mi  
Crew: 2

# **MH-6 Little Bird SOF Helicopter**





## CH-47 Chinook

Type: Heavy-lift cargo helicopter  
Entered Army service: 1962  
Variants in service: CH-47C/D,  
MH-47D/E  
Specifications: (CH-47D)  
Length overall: 51 ft  
Weight: 53,500 lbs  
Range: 245 mi  
Crew: 3

# CH-47 Chinook Cargo Helicopter





# UH-60 Blackhawk Utility Helicopter

## ▲ **UH-60 Black Hawk**

Type: Utility helicopter

Entered Army service: 1979

Variants in service: UH-60A/L,  
EH-60C, MH-60K

Specifications: (UH-60A)

Length overall: 50 ft

Weight: 20,250 lbs

Range: 375 mi

Crew: 3



## ► **C-12 Huron**

Type: Utility transport/reconnaissance aircraft

Entered Army service: 1975

Variants in service: C-12D/F/R, RC-12D/G/H/K/N/P

Specifications:

Length overall: 43 ft 9 in

Weight: 15,500 lbs

Range: 1,280 mi

Crew: 2-4



## ► **C-23 Sherpa**

Type: Medium utility transport aircraft

Entered Army service: 1985

Variants in service: C-23A/B/B+

Specifications:

Length overall: 58 ft

Weight: 25,600 lbs

Range: 1,185 mi

Crew: 3



## ► **RC-7**

Type: Reconnaissance/surveillance aircraft

Entered Army service: 1992

Variants in service: ARL-C, ARL-I, ARL-M

Specifications:

Length overall: 80 ft 8 in

Weight: 26,700 lbs

Range: 1,500 nm

Crew: 6

Trans  
-  
Recon

# UH-1 Iroquois Utility Helicopter “Huey”

## **UH-1 Iroquois**

Type: Light utility helicopter

Entered Army service: 1959

Variants in service: UH-1H/1V

Specifications:

Length overall: 44 ft 6 in

Weight: 9,500 lbs

Range: 300 mi

Crew: 3



# UAV



## ▲ *Hunter UAV*

Type: Tactical unmanned aerial vehicle

Entered Army service: 1994

Specifications:

Length overall: 22 ft 6 in

Weight: 1,600 lbs

Endurance: 8-10 hours

# The Army's "Navy"

## ► LCU-2000

Type: Utility landing craft  
Entered Army service: 1990  
Specifications:  
Length: 174 ft  
Displacement:  
1,087 long tons  
Draft: 9 ft  
Cargo area: 2,500 sq ft  
Range: 6,500 nm  
Crew: 13



## ► LSV

Type: Logistical support vessel  
Entered Army service: 1988  
Specifications:  
Length: 273 ft  
Displacement: 4,199 long tons  
Draft: 12 ft  
Cargo area: 10,500 sq ft  
Range: 8,358 nm  
Crew: 30



## ► Large Tug

Type: Ocean-going tug  
Entered Army service: 1994  
Specifications:  
Length: 128 ft  
Displacement: 1,057 long tons  
Draft: 17 ft  
Range: 5,000 nm  
Crew: 18

